

## 1997 Chevrolet S10 Pickup

POWER WINDOWS 1997 ACCESSORIES/SAFETY EQUIP General Motors Corp. - Power Windows

### POWER WINDOWS

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### DESCRIPTION & OPERATION

A permanent-magnet motor operates each power window. Each motor raises and lowers window when voltage is supplied. Motor direction depends on polarity of supply voltage. Switches control supply voltage polarity.

Master door lock/power window switch assembly controls all motors. Individual window switches are located on each door panel. Each motor is protected by a built-in circuit breaker. If a window switch is held too long with window obstructed or after window is fully up or down, circuit breaker opens circuit. Circuit breaker resets automatically as it cools.

### TROUBLE SHOOTING

Before proceeding to **TESTING** , perform the following visual inspections:

- Check POWER WINDOW CIRCUIT BREAKER for damage. Replace if damaged.
- Check power window voltage supply fuse. If fuse is blown, service and repair source of overload. Replace fuse.
- Check for mechanical failures or binding linkage.
- If express down feature does not work, but window moves down with each switch depression, replace left window switch.
- Check for broken or partially broken wire inside insulation, which could cause system malfunction but prove good in a continuity/voltage check with system disconnected. These circuits may be intermittent or resistive when loaded. Check by monitoring voltage drop with system under load.
- Check for proper installation of aftermarket electronic equipment.

### TESTING

**CAUTION:** When battery is disconnected, vehicle computer and memory systems may lose memory data. Driveability problems may exist until computer systems have completed a relearn cycle. See **COMPUTER RELEARN PROCEDURES** article in **GENERAL INFORMATION** before disconnecting battery.

**NOTE:** Before any testing is attempted, battery should be fully charged and all connections and pins cleaned and tightened to ensure proper continuity and ground.

**NOTE:** See appropriate wiring diagram under **WIRING DIAGRAMS** to assist in testing procedures.

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### 2-DOOR

#### Windows Do Not Operate

1. Turn ignition switch to RUN position. Connect test light between ground and Yellow wire at left window switch 11-pin connector. If test light illuminates, go to next step. If test light does not illuminate, repair open in Yellow wire between left window switch and fuse block.
2. Connect test light between left window switch 11-pin connector Yellow and Black wires. If test light illuminates, check window switch for poor connection. If connection is okay, replace left window switch. If test light does not illuminate, repair open in Black wire between left window switch and ground.

#### Left Window Inoperative/Right Window Operates Okay

1. Turn ignition switch to RUN position. Connect test light between left window switch 8-pin connector Dark Blue and Brown wires. Observe test light and operate switch between UP and DOWN positions. If test light illuminates in both positions, go to next step. If test light does not illuminate in both positions, check left window switch for poor connection. If connection is okay, replace left window switch.
2. Connect test light between left window motor connector Dark Blue and Brown wires. Observe test light and operate switch between UP and DOWN positions. If test light illuminates in both positions, check left window motor connector for poor connection. If connection is okay, replace left window motor. If test light does not illuminate in both positions, repair open in Dark Blue or Brown wires between left window switch connector and left front window motor connector.

#### Right Window Inoperative From Individual Window Switch/Operates Okay From Left Window Switch

1. Turn ignition switch to RUN position. Connect test light between ground and Yellow wire at right window switch 11-pin connector. If test light illuminates, go to next step. If test light does not illuminate, repair open in Yellow wire between right window switch and fuse block.
2. Connect test light between right window switch 11-pin connector Dark Blue and Brown wires. Operate window between UP and DOWN positions. If test light illuminates in both positions, go to next step. If test light does not illuminate in both positions, check window switch for poor connection. If connection is okay, replace right window switch.
3. Connect test light between right window motor connector Dark Blue and Brown wires. Operate window switch between UP and DOWN positions. If test light illuminates in both positions, check right window motor for poor connection. If connection is okay, replace right window motor. If test light does not illuminate in both positions, repair open in Dark Blue or Brown wires between right window switch and right window motor.

#### Right Window Inoperative From Both Left & Right Switch/Left Window Operates Okay

1. Turn ignition switch to RUN position. Connect test light between right window motor connector Brown and Dark Blue wires. Operate window switch between UP and DOWN positions. If test light does not illuminate in both positions, go to next step. If test light illuminates in both positions, check right window motor for poor connection. If connection is okay, replace right window motor.
2. Connect test light between right window switch 11-pin connector Light Blue and Tan wires. Operate right window switch (at left window switch) between UP and DOWN positions. If test light illuminates in both

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directions, go to next step. If test light does not illuminate in both directions, go to step 4).

3. Connect test light between right window switch 11-pin connector Dark Blue and Brown wires. Operate right window switch between UP and DOWN positions. If test light illuminates in both positions, repair open in Dark Blue or Brown wires between right window switch and right window motor. If test light does not illuminate in both positions, check right window switch for poor connection. If connection is okay, replace right window switch.
4. Connect test light between left window switch 8-pin connector Light Blue and Tan wires. Operate switch for inoperative window at left window switch. If test light illuminates in both positions, repair open in Light Blue or Tan wires between left window switch and right window switch. If test light does not illuminate in both positions, replace left window switch.

## 4-DOOR

### All Windows Do Not Operate

1. Turn ignition switch to RUN position. Connect test light between ground and Yellow wire at left front window switch 11-pin connector. If test light illuminates, go to next step. If test light does not illuminate, repair open in Yellow wire.
2. Connect test light between left front window switch 11-pin connector Yellow and Black wires. If test light illuminates, check window switch for poor connection. If connection is okay, replace left front window switch. If test light does not illuminate, repair open in Black ground wire.

### Left Front Window Inoperative/All Others Okay

1. Turn ignition switch to RUN position. Connect test light between left front window switch 8-pin connector Dark Blue and Brown wires. Operate switch between UP and DOWN positions. If test light illuminates in both directions, go to next step. If test light does not illuminate in both directions, check left front window switch for poor connection. If connection is okay, replace left front window switch.
2. Connect test light between left front window motor Dark Blue and Brown wires. Observe test light and operate switch between UP and DOWN positions. If test light illuminates in both positions, check left front window motor connector for poor connection. If connection is okay, replace motor. If test light does not illuminate in both positions, repair open in Dark Blue or Brown wire between left front window switch and left front window motor.

### Right Front, Left Rear, Or Right Rear Window Inoperative From Individual Window Switch, But Operates Okay From Left Front Switch

1. Turn ignition switch to RUN position. Place window lock-out switch in OFF position. Connect test light between inoperative window switch connector Dark Blue wire (left rear and right rear), or Yellow wire (right front window switch) and ground. If test light illuminates, go to next step. If test light does not illuminate, repair open in Dark Blue or Yellow wires as necessary.
2. Connect test light between inoperative window switch connector Dark Blue and Brown wires. Operate window between UP and DOWN positions. If test light illuminates in both positions, go to next step. If test light does not illuminate in both positions, check inoperative window switch for poor connection. If connection is okay, replace inoperative window switch.
3. Connect test light between inoperative window motor connector Dark Blue and Brown wires. Operate

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window between UP and DOWN positions. If test light illuminates in both positions, check inoperative window motor for poor connection. If connection is okay, replace inoperative window motor. If test light does not illuminate in both positions, repair open in Dark Blue or Brown wires between inoperative window switch and window motor.

### **One Window (Other Than Left Front) Is Inoperative From Left Front Window Switch & Individual Window Switch/All Other Windows Operate Okay**

1. Turn ignition switch to RUN position. Connect test light between inoperative window motor connector terminals "A" (Brown wire) and "B" (Dark Blue wire). Operate window switch between UP and DOWN positions. If test light does not illuminate in both positions, go to next step. If test light illuminates in both positions, check inoperative window motor for poor connection. If connection is okay, replace window motor.
2. Connect test light between inoperative rear window switch connector terminals "A" (Dark Green or Light Green wire) and "D" (Purple wire), or between right front window switch connector terminals "J" (Light Blue wire) and "L" (Tan wire). Operate inoperative window switch (at left front switch) between UP and DOWN positions. If test light illuminates in both positions, go to next step. If test light does not illuminate in both positions, go to step 4).
3. Connect test light between right front inoperative window switch 11-pin connector terminals "G" (Dark Blue wire) and "K" (Brown wire), or between rear inoperative window switch connector terminals "F" (Brown wire) and "C" (Dark Blue wire). Operate inoperative window switch between UP and DOWN positions. If test light illuminates in both positions, repair open in Dark Blue or Brown wires between inoperative window switch and window motor. If test light does not illuminate in both positions, check inoperative window switch for poor connection. If connection is okay, replace inoperative window switch.
4. Connect test light between left front window switch connectors. For right front, connect test light between terminals "B" (Light Blue wire) and "D" (Tan wire) at 8-pin connector. For left rear, connect test light between terminals "A" (Dark Green wire) and "D" (Purple wire). For right rear, connect test light between terminals "A" (Light Green wire) and "D" (Purple wire). If test light illuminates in all positions, repair poor connection or open in appropriate wiring. If test light does not illuminate in all positions, replace left front window switch.

### **Lock-out Function Does Not Work But Windows Operate Okay**

Turn ignition switch to RUN position. Put window lock-out switch in LOCK position. Using a test light, backprobe between lock-out switch connector terminal "B" (Dark Blue wire) and ground. If test light illuminates, replace lock-out switch. If test light does not illuminate, repair short to voltage in Dark Blue wire.

## **REMOVAL & INSTALLATION**

**CAUTION:** When battery is disconnected, vehicle computer and memory systems may lose memory data. Driveability problems may exist until computer systems have completed a relearn cycle. See **COMPUTER RELEARN PROCEDURES** article in **GENERAL INFORMATION** before disconnecting battery.

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### WINDOW MOTOR

#### Removal & Installation

1. Disconnect negative battery cable. Raise window to fully closed position. Secure glass to door frame using cloth-backed tape. Remove door garnish molding. Remove armrest mounting screws and armrest.
2. Remove power window switch. See WINDOW SWITCH. Remove door trim panel retaining screws. Using Trim Panel Remover (J 38778) pry retainers from door frame, and remove door trim panel. Remove armrest bracket. Remove water protection shield. Disconnect electrical connectors from motor.

**CAUTION: Sector gear must be locked into position. Regulator lift arm is under tension from counterbalance spring and could cause personal injury if sector gear is not locked in position.**

3. Drill hole through regulator sector gear and backplate. Install bolt and nut, locking sector gear into position. Drill out window motor mounting rivets. Remove motor from window regulator. To install, reverse removal procedure. Use 3/16" (4.8 mm) rivets to install motor and regulator.

### WINDOW SWITCH

#### Removal & Installation

Disconnect negative battery cable. Using flat-blade screwdriver, pry power window switch from door trim panel. Disconnect electrical connector and remove power window switch. To install, reverse removal procedure.

### WIRING DIAGRAMS

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**Fig. 1: Power Window System Wiring Diagram (2-Door)**

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**Fig. 2: Power Window System Wiring Diagram (4-Door)**